

REMARKS

In this Response claims 1, 5, 17, 24, 26, and 28-29 have been cancelled, without prejudice; claims 34-38 have been added; and claims 2-3, 6, 8, 11, 15-16, 18, 21, 23, 25, 27, and 30-33 have been amended to correct informalities, update dependencies, and/or updated antecedent basis. Support for these amendments and additions is found throughout the originally filed specification.

Specification

In the Office Action, the disclosure is objected to for various informalities. The Applicants have amended “partition 42” to “partition 43” in order to correct these informalities and therefore request withdrawal of this objection.

Claim Objections

Claim 25 is objected to because of various informalities. These informalities have been corrected due to amendments presented to this claim. Therefore, the Applicants request this objection be withdrawn.

Claim Rejections – 35 USC 112

Claims 1-16 and 24-33 are rejected under 35 USC 112, second paragraph, as being indefinite. Specifically, it is alleged that a reference to an industry standard makes the claims inherently vague and indefinite as the industry standards are subject to change and/or revision.

While the underlying independent claims 1, 17, 24 and 28 have been cancelled, newly added independent claims 34, 36, 37 and 38 may include language similar to the language prompting these rejections.

The Applicants believe that the element “industry standard having a plurality of specifications governing the form factor and the external dimensions” satisfies the test for definiteness under 35 USC 112, 2nd paragraph. This test is articulated in MPEP 2173.02 as would one skilled in the art “understand what is claimed when the claim is read in light of the specification.” Orthokinetics, Inc. v. Safety Travel Chairs, Inc., 806 F.2d 1565, 1576, 1 USPQ2d 1081, 1088 (Fed. Cir. 1986).

The claim term “industry standard” is clearly discernible for at least two reasons. First, the claim term has an established, well-known meaning in the art. Second, the claim term’s interpretation is provided further guidance by the specification, e.g., in paragraphs [0018] and [0019]. In this light, one skilled in the art would be able to clearly identify the meaning of “industry standard” as used in the claims.

For at least these reasons, the Applicants respectfully assert that the claim language satisfies 35 USC 112, 2nd paragraph.

Claim Rejections – 35 USC 102 and 103

In the Office Action claims 1-33 are rejected under 102 and/or 103 over the following references, individually or in asserted combinations: Hughes, et al (US 6,011,690) (hereinafter Hughes); Suzuki et al (US 6,031, 718) (hereinafter “Suzuki”); Katooka et al (US 5,424,915) (hereinafter “Katooka”); Wagner (US 6,459,578) (hereinafter “Wagner”); Pokharna (US 6,801,430) (hereinafter “Pokharna”).

The underlying independent claims 1, 17, 24 and 28 have been cancelled. The dependent claims presently all depend on newly added claims. Therefore, these rejections stand moot in light of these amendments. However, the various references will be discussed below with reference to the new claims.

New Claims

Claims 34-38 have been added. Claim 34 recites a standardized peripheral apparatus comprising:

- a board;
- an integrated circuit coupled to the board;
- a case, enclosing the integrated circuit and the board, having a form factor including a plurality of external dimensions compatible with an industry standard having a plurality of specifications governing the form factor and the external dimensions; and
- a thermal management arrangement including
 - a vent on the case to at least facilitate an exhaust of heat convectively emitted from the integrated circuit into an ambient, and
 - a flow generating device coupled to the board to provide an air current to at least facilitate the exhaust of the convectively emitted heat through the vent.

None of the cited articles, alone or in combination, teach, suggest, or imply a standardized peripheral apparatus as described in claim 34.

Hughes

Hughes was used as a basis for a 102 rejection of claim 1.

Hughes clearly does not provide a vent or a flow generating device, as recited in claim 34. Hughes relies solely on conduction through the heat spreading element **26** and stainless steel cover panel **22**.

Suzuki

Suzuki was used as a basis for a 102 rejection of claims 1-3, 15-17, 24-26, 28-29, and 31 and a 103 rejection of claim 33.

Suzuki clearly does not provide a flow generating device and an integrated circuit coupled to the same board, as recited in claim 34. In Suzuki, the electronic components **6** are mounted to the metal wiring board **3b**, while the fan is coupled to the rear portion **15**, e.g., see **FIG. 12**. Furthermore, Suzuki clearly does not provide a vent or a flow generating device to facilitate an exhaust of heat convectively emitted from the integrated circuit. Suzuki, similar to Hughes, relies on conduction through walls to remove heat from electronic elements **6**. See, e.g., **FIG. 19**. Once this heat is conducted through the wall **22**, only then is it subjected to currents provided by the fan **25**.

Suzuki and Katooka

Katooka was combined with Suzuki to form a 103 combination to reject claims 4 and 18.

There is insufficient motivation to combine Katooka with Suzuki in a manner to make claim 34 obvious. In the Office Action it was conceded that Suzuki did not disclose a first and second vent on the same surface, but Katooka was provided to supply this element. Katooka deals with a power supply device, without any mention of the case having a form factor with external dimensions compatible with an industry standard. To rely upon Suzuki's teaching of the case complying with an industry standard, the modified device must still be compatible with a PCMCIA port. However, it is clear that modifying the IC Card of Suzuki to include the elaborate airflow plan

depicted in Katooka would fundamentally change the structure of Suzuki's IC card; most likely resulting in an IC card that did not comply with any standard IC card ports, i.e., ceasing to comply with an industry standard. Thus, there is insufficient teaching, in the art or elsewhere, to even suggest that such a modification is possible, much less desirable.

Suzuki and Wagner

Wagner was combined with Suzuki to form a 103 combination to reject claims 11-14.

There is insufficient motivation to combine Wagner with Suzuki in a manner to make claim 34 obvious. In the Office Action it was conceded that Suzuki fails to teach a partition and a flow generating device, but Wagner was provided to supply these elements. Wagner deals with a chassis. Similar to Katooka, there is no mention of the case having a form factor with external dimensions complying with an industry standard. To rely upon Suzuki's teaching of complying with an industry standard, the modified device must still be compatible with a PCMCIA port. However, it is clear that modifying the IC Card of Suzuki to include the partition and flow generating device depicted in Wagner, would fundamentally change the structure of Suzuki's IC card; most likely resulting in an IC card that did not comply with any standard IC card ports, i.e., ceasing to comply with an industry standard. Thus, there is insufficient teaching, in the art or elsewhere, to even suggest that such a modification is possible, much less desirable.

Suzuki and Pokharna

Pokharna was combined with Suzuki to form a 103 combination to reject claims 5-10, 27, 30, and 32. Pending claims 6-10, 30, and 32 depend from, or include limitations similar to, claim 34.

Even assuming, arguendo, this combination is properly motivated, it would still fail to teach every element of claim 34. In the Office Action it was conceded that Suzuki fails to teach a flow generating device, but Pokharna was relied upon for this element. Actually, Suzuki does teach a flow generating device, see, for example, fans depicted in FIGs. 12, 19, and 20. However, substituting the actuation membrane of Pokharna for the fans of Suzuki still fails to teach a flow generating device to facilitate an exhaust

of heat convectively emitted from the integrated circuit. As discussed above, and as can be clearly seen from FIGs. 12, 19, and 20, Suzuki relies upon conduction to transfer the heat to an airflow chamber. Only then will the flow generating device facilitate an exhaust of the heat.

Suzuki, Pokharna, and Katooka

Katooka was combined with Suzuki and Pokharna to form a 103 combination to reject claims 19-23.

As discussed above, there is insufficient motivation to combine Suzuki and Katooka, much less to combine Suzuki and Katooka and Pokharna.

For at least these reasons, claim 34 is patentable over these articles, alone or in combination. Furthermore, the remaining claims 2-4, 6-16, 18-23, 25, 27, 30-33, and 35-38 depend from, or include limitations similar to, claim 34. Therefore, these claims are patentable over these articles for at least the same reasons given above

Conclusion

Applicant respectfully submits that the claims 2-4, 6-16, 18-23, 25, 27, and 30-38 are presented in allowable form. Accordingly, a Notice of Allowance is respectfully requested.

If the Examiner has any questions, he is invited to contact the undersigned at (503) 796-2972.

The Commissioner is hereby authorized to charge shortages or credit overpayments to Deposit Account No. 500393.

Respectfully submitted,
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